

240394US-90 CONT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :

Tomoko OHTSUKI ET AL. : ATTN: APPLICATION DIVISION

SERIAL NO: NEW CONT APPLICATION

FILED: HERewith

FOR: LIGHT SOURCE UNIT AND
WAVELENGTH STABILIZING
CONTROL METHOD, EXPOSURE
APPARATUS AND EXPOSURE
METHOD, METHOD OF MAKING
EXPOSURE APPARATUS, AND
DEVICE MANUFACTURING
METHOD AND DEVICE

PRELIMINARY AMENDMENT

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Prior to a first examination on the merits, please amend this application as follows:

IN THE SPECIFICATION

Page 32, lines 5-16, please delete the paragraph and replace it with the following paragraph:

With the fourth light source unit according to the present invention, the temperature dependence data may further include data on temperature dependence of the center wavelength of the laser beam oscillated from the laser light source, and the first control unit may perform wavelength control of the laser light source together, when performing the absolute wavelength calibration. In such a case, the absolute wavelength calibration can be

completed within a shorter period of time compared with the case when wavelength control of the laser beam is not performed. However, the wavelength of the laser beam does not necessarily have to be controlled, when performing the absolute wavelength calibration.

Page 138, line 18, through page 139, line 6, please delete the paragraph and replace it with the following paragraph:

Meanwhile, instead of driving the driving elements 74a, 74b, and 74c to correct the environmental change including the atmospheric change of the projection optical system PL referred to above by providing instructions to the image forming characteristics correction controller 78, the main controller 50 may obtain the change in pressure, temperature, and humidity from the standard state based on the measurement values of the environmental sensor 77 at every predetermined timing since exposure on the first wafer has started, and calculate the amount of wavelength change to almost cancel out the environmental change of the image forming characteristics of the projection optical system PL due to the change in pressure, temperature, and humidity. And, according to the amount of wavelength change calculated, the main controller 50 may positively change the oscillation wavelength of the laser light source 160A. The environmental sensor 77 may be a sensor to detect the atmosphere.

Page 161, line 24, through page 162, line 20, please delete the paragraph and replace it with the following paragraph:

The exposure apparatus in the embodiment above is made by assembling various subsystems including elements defined in the claims of the present application so as to keep a predetermined mechanical precision, electrical precision, and optical precision. In order to ensure these areas of precision, prior to and after the assembly, adjustment (for example, optical axis adjustment) is performed on various optical systems such as the illumination